

DEPARTMENT OF THE NAVY

NAVAL INTELLIGENCE SUPPORT CENTER 4301 SUITLAND ROAD WASHINGTON, DC 20390

IN REPLY REFER TO Ser 33/S3031

Commanding Officer, Naval Intelligence Support Center From:

Director of Naval History, Washington Navy Yard, To:

Washington, DC 20390

Subj: Command History 1982

Ref: (a) OPNAVINST 5750.12C of 29 Jan 1980

Encl: (1) Historical Review 1982

(2) Biography of Commanding Officer

(3) Photograph of Commanding Officer

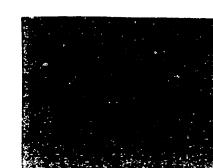
1. (U) In accordance with reference (a), enclosures (1) through (3) are forwarded.

HISTORICAL REVIEW 1982

Enclosure (1) to NISC 1tr Ser 33/S3031 of

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I - OPERATIONS (NISC-000)

Summary of Taskings/Visits/Briefings in 1982

- 3,453 Action Taskings received
 - 240 Briefings Presented
 - 128 VIP visitors to NISC
 - 211 Conferences/Working Group Meetings

VIP Briefings/Tours

11 Fe 12 Fe 19 Fe 25 Fe 24 Ma 5 Ap 6 Ma 11 Ma 27 Ma	n 1982 b 1982 b 1982 b 1982 b 1982 r 1982 r 1982 y 1982 y 1982 y 1982 n 1982	RADM J. W. Cronin, Director, Naval Reserve CNO Executive Panel Mr. Clay/Mr. Catlin, HASC Mr. G. Weiss, National Security Council Mr. H. Switzer/Mr. W. Fleshman, HASC RADM E. W. Carter, III, OP-008 RADM J. B. Mooney, Jr., OP-952 RADM C. R. Larson, OP-00X RADM W. C. Neel, OP-038 RADM R. Fountain, Jr., NAVSEA-63 Hon. M. R. Paisley, ASSTSECNAV, RE&S
	n 1982	Mr. T. Sesaw, Advisor to RADM Butts
	1 1982	RADM F. B. Kelso, OP-21
	1 1982	Mr. J. Armstrong/Mr. Jim Ravers, CIA
	1 1982	RADM B. T. Hacker, CTF-67
	1 1982	COMMO A. J. Dunn, RN., Dep. Dir., Service Intel.
	1 1982	RADM L. S. Kollmorgen, CNR
	p 1982	VADM C. A. H. Trost, OP-090
	p 1982	Mr. P. Mantle, Director, Technology Assmt. Div.
	p 1982	RADM T. J. Cassidy, Director, Tactical Readiness
	p 1982	COMMO H. L. Webster, Director, EW/Crypto Div.
28 Se	p 1982	Mr. P. Mantle, Director, Technology Assmt. Div.
29 Se	p 1982	RADM G. M. Furlong, COMFIITAEWINGPAC
19 Oc	t 1982	RADM P. B. Booth, Naval Air Training Center
21 Oc	t 1982	Dr. J. Vorona, DIA/DT
26 Oc	t 1982	RADM Sang Hwa Choe, Dep. CNO Korean Navy
27 Oc	t 1982	VADM R. L. Walters, Dep. CNO Surface Warfare
28 Oc	t 1982	Mr. Harold Kitson, Dep. Asst. SECNAV, C3I
l No	v 1982	RADM Gallo, Italian DNI
22 No	v 1982	RADM S. Shapiro (Ret), Former DNI
l De	c 1982	RADM F. C. Johnson, COMTRAPAC
22 De	c 1982	Ms. Annette Smiley, Staff, House Permanent Select
29 De	c 1982	Committee for Intelligence RADM R. Fountain, Jr., NAVSEA-63

Foreign Materiel Reports Produced in 1982

NIC-1840X-003-81	Magnetic Characteristics of Steel
NIC-1720X-002-81	Communications Buoy
NFMP-002-81-SUB 1	Metric Reporting Guidelines
NIC-1700X-001-81	Integrated Circuits
NIC-1250X-002-81	Underwater Breathing Apparatus
NIC-1740X-003-82	Hydrophone Evaluation
NIC-1740X-004-81	Acoustic Data Collection System
NIC-1740X-001-82	Unidentified Buoy
NIC-1720X-001-82	Emergency Receiver
	Evaluation of Metal Samples
NIC-1700X-001-82	Integrated Circuits
NIC-1820X-003-82	Digital Current Meter
NIC-1260X-003-82	Mine Neutralization Charge Dispenser
NIC-1080X-001-82	VLF Communications Device
NIC-1020X-002-82	Titanium Product

II - RESOURCE MANAGEMENT/COMPTROLLER (NISC-OOR)

In the Office of Resource Management, Mr. Robert B. Goldberg served as Comptroller and Mrs. Patricia DeMartini served as Assistant Comptroller. LT D.R. Grenier came on board in January 1982 as the Supply Officer.

The Plans, Programs & Policy Unit was established in FY82. Headed by Mr. George Buss, this unit is responsible for the initiation, supervision, coordination and submission of the Program Objectives Memorandum (POM); General Defense Intelligence Program (GDIP); Congressional Budget Justification; Five Year Plan; and special and ongoing management/resources studies and analyses.

The Internal Review Branch was also established in 1982 and Mr. Billy T. Johnson was hired as its chief.

Authority was granted to hire for a newly established billet to handle the Command plant property and excess property.

The Shore Required Operational Capabilities (SHOROC) and Shore Requirements Standards, and Manpower Planning System (SHORSTAMPS), and the NISC travel, training and personnel functions were transferred to the newly established staff element, Office of Support Programs (OSP).

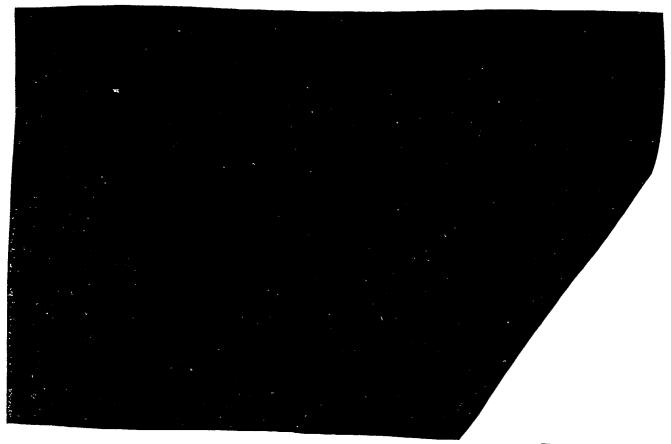
The Budget for FY82 consisted of \$237,000 for RDT&E; \$202,000 for Other Procurement, Navy; \$29,500,000 for Operation and Maintenance, and \$3,134,000 for military manpower. Authorized manpower levels for calendar year 1982 were 570 civilians and 144 military in January 1982 for a total of 714 and 585 civilians and 154 military in December 1982 for a total of 740.

III - NAVAL WARFARE CAPABILITIES (NISC-OOW)

- (U) CAPT V. K. Bowles and Mr. R. Elliott continued as Head and Deputy Head of NISC-OOW, respectively. A new billet, Director of Threat Assessments, was created and filled by Dr. W. Reese in August. Other organizational changes included the entry on board of LCDRs W. Hart, J. Janeczek, R. Lyman, C. Voros, LT W. Harding, Dr. L. Hedges and Mr. B. Levengood. Two retirements occurred: LCDR W. Moore and Mr. T. Delianides. LCDR J. Naeve was reassigned and Mrs. C. Miller resigned.
- (U) During this period, 267 threat support taskings were completed and 12 threat assessments were produced in support of various programs, projects, or laboratory efforts. During the past year, the following five DIA publications were disseminated:
 - "Soviet Threat to U.S. Naval Air Forces (STAF) (U), " March 1982
 - "Soviet Naval Surface Force Capabilities (SURFCAP) (U), " May 1982
 - "Soviet Submarine Capabilities (SUBCAP) (U)," July 1982
 "Soviet Air Capabilities Against U.S. Naval Forces (AIRCAP)
 (U)," August 1982
 - "The Soviet Naval Threat Circa 2000 (U)," October 1982
- (U) NISC-OOW personnel presented 150 major briefings, attended 250 meetings, and were involved in 50 conferences/workshops/visits. The briefings were presented to OPNAV, NAVMAT, other members of the Intelligence Community, the General Accounting Office (GAO), and various Congressional/Senatorial staffs.
- (U) Approximately 7,000 Soviet Threat Slide Rules (one each for Missiles, Submarines, Surface Ships, and Aircraft) were disseminated in October 1982, primarily for use by operational units and others needing a quick reference to threat parameters.
- (U) The compiliation of inputs to specific National Intelligence Estimates (NIEs) comprised another area of OOW production. During 1982, OOW personnel contributed substantive inputs to
- (U) In regard to NWP 12-5, "The Tactical Action Officer Handbook," AIG lists were approved which will allow NISC to issue updates to NWP 12-5 directly to the Fleet. A message change and page change were completed and sent to the Fleet. A major reorganization of the recognition guide series (NWP 12-7) was begun by NISC-70 with NISC-00W doing the coordination. The first of these recognition guides, NWP 12-7-1, "Recognition Guide to Major Combatants" was completed in 1982 and sent to the Navy Tactical Support Activity (NAVTACSUPPACT). The second in the series, NWP 12-7-3, "Recognition Guide to Minor Combatants" was begun. A major revision to NWP 12-8, "The Threat Intelligence

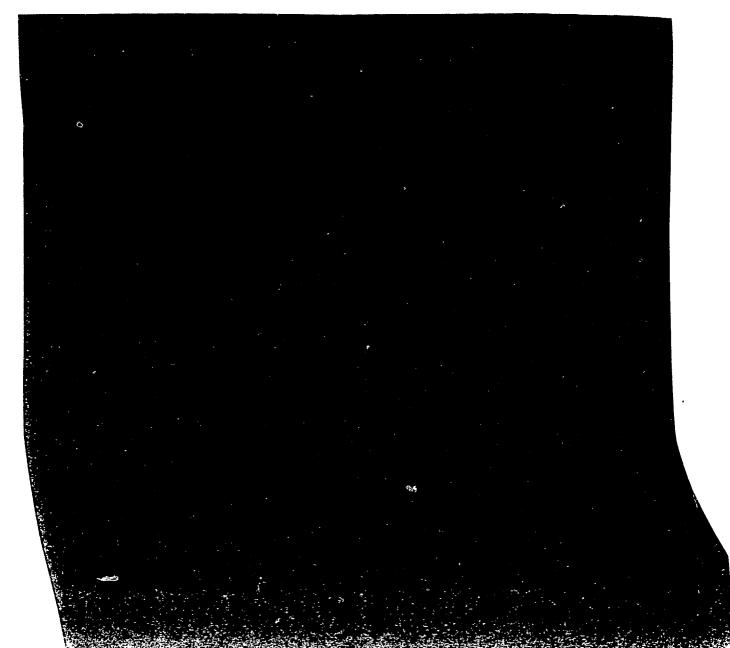


- (U) In 1982, NISC established a working group to study Soviet Underice Capabilities. The working group, composed of members from each of the line divisions and chaired by NISC-OOW, was charged with the coordination and analysis of all-source intelligence data not only on Soviet Underice Capabilities per se, but also relative to environmental data as it affects naval capabilities.
- (U) NISC-OOW began an effort to design, implement, and maintain a Command Position Data Base (CPDB) supported by an on-line ADP system that is suitably comprehensive, flexible, responsible, and "user friendly" to meet selected NISC internal interdepartmental needs as well as external hard copy and digitized production requirements (to include DIA, fleet systems and centers, national systems and centers, OSIS, NIPS, and others).
- (U) NISC-OOW continued a relatively high level of support for the Integrated Automated Intelligence Processing System (IAIPS) development effort, providing extensive data base development support to Sterling Systems and the IAIPS PMO. Additionally, NISC-OOW provided representation at numerous Configuration Control Board meetings, served as Functional Coordinator for Service Center development activities, provided representation on the IAIPS Development Oversight Board (IDOB), and assisted NISC-OSP in several alternative architecture and design studies.



Summary for Naval Air Forces," was completed and is now being sent to other agencies for review.

- (U) NISC-OOW continued coordination of the NISC Weekly Wire (Part I Intelligence) production. Fifty-two Weekly Wires at the SECRET level and 30 supplements at a higher classification were produced during 1982. The popular reception of the Weekly Wire by the Fleets and multi-service shore commands continues. At the end of the year, addressees totaled 718 (270 shore commands and 448 mobile units). This total reflects a growth from the 686 total at the start of the year.
- (U) The Navy member of the DCI's Scientific and Technological Intelligence Committee, the Joint Atomic Energy Intelligence Committee, and the Technology Transfer Intelligence Committee China Working Group are members of OOW. All are Inter-Agency Working forums formed to produce selected studies for decision makers at the national level.



IV - UNDERSEA WARFARE TECHNOLOGY DEPARTMENT (NISC-20)

(U) Signature Characteristics



(U) Radiated Noise Levels



(U) ASW Assessments

(U) The Department continues to be concerned with collection, detailed technical analysis, evaluations and production of intelligence related to foreign underwater acoustic and nonacoustic ASW detection capabilities, related equipments, technologies and special applications.

In addition to regularly scheduled DIA publications and routine project or program support, a number of special studies and assessments were conducted resulting in briefings, weekly wire items, STIR articles, point papers and special studies. The most significant were:



(U) Fleet Support

(U) NISC-26 continues to be the only complete military division of NISC with an E-9 division officer, the division complement consists of 17 submarine support; 9 surface support, and 6 shore duty personnel.

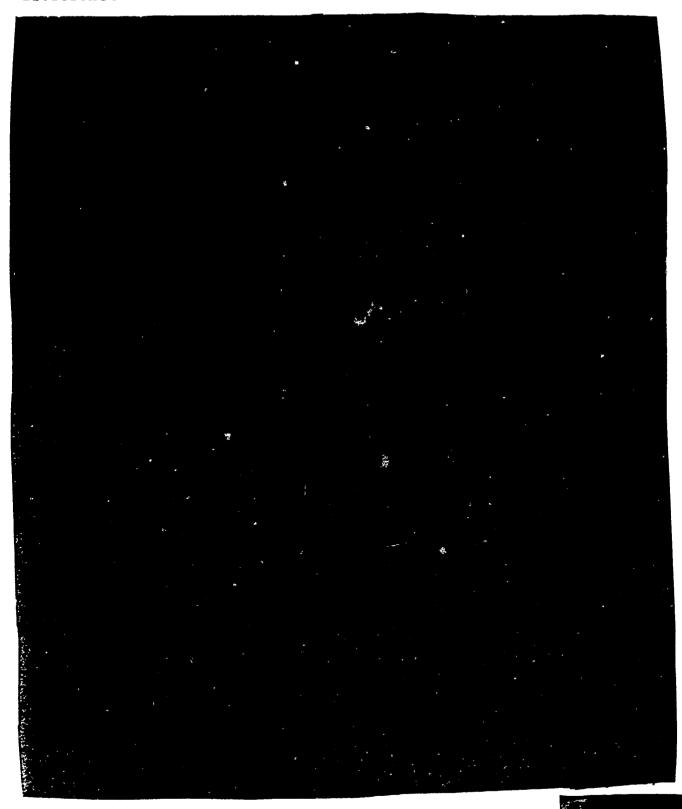


(U) Special Support

a.

V - NAVAL SYSTEMS DEPARTMENT (NISC-30)

1. (U) The Naval Systems Department is comprised of five divisions:





- 2. (U) CDR James Agnew was Department Head until 10 August 1982, when he was relieved by CDR John Bentz.
- 3. (U) NISC-30 produced or co-produced the following 13 publications which were distributed in 1982:

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NAVAL SHIPS CHARACTERISTICS-USSR, COMBATANTS (U)
(DST-1210H-049-79-CHG 2)
NAVAL SHIPS CHARACTERISTICS-USSR, AUXILIARIES (U)
(DST-1210H-050-80-CHG 1)
NAVAL SHIPS CHARACTERISTICS-EASTERN EUROPE (U)
(DST-1200H-043-82)
NAVAL RELATED LIFE SCIENCE TRENDS (U)
(DST-1810S-333-82)
NAVAL FORCES R&D RESOURCES-USSR (U)
(DST-1830S-396-81-CHG 1)
NAVAL FORCES R&D RESOURCES-USSR (U)
(DST-1830S-396-81-SUP 1)
MERCHANT MARINE ID GUIDE-WORLD-WIDE SHIPS NAME ORDER AND HULL TYPE
LISTINGS (U)
(DST-2050G-612-82)
MERCHANT MARINE ID GUIDE-WORLD-WIDE SHIPS NAME ORDER AND HULL TYPE
LISTINGS (U)
(DST-2050G-612-82-CHG 1)
MERCHANT MARINE ID GUIDE-WORLD-WIDE SHIPS NAME ORDER AND HULL TYPE
LISTINGS (U)
(DST-2050G-612-82-CHG 2)
MERCHANT MARINE ID GUIDE-WORLD-WIDE SHIPS NAME ORDER AND HULL TYPE
LISTINGS (U)
(DST-2050G-612-82-CHG 3)
COMMUNIST MERCHANT MARINE ID GUIDE (U)
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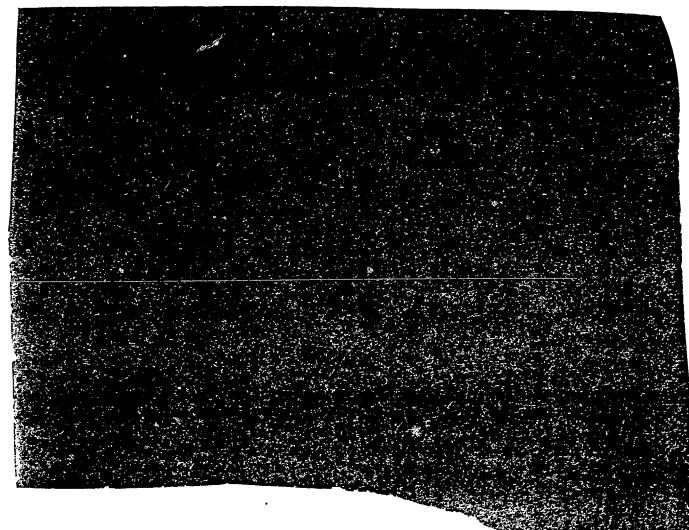
(DST-2050C-609-80-CHG 1)

- 6. (U) In 1982, NISC-30 produced the following 3 papers for presentation at the 1982 CANUKUS Conference:
- -SURFACE SHIP DEVELOPMENTS UPDATE
- -SOVIET AND EAST EUROPEAN MERCHANT FLEET ACQUISITIONS
- -NAVAL AIRCRAFT DEVELOPMENTS

In addition, the following article was published in the Naval Intelligence Command Newsletter:

-LOSS OF THE SHEFFIELD

7. (U) The Department received 596 requests for information of which 438 were delivered, 41 were in research at the end of the year and 117 were continuing requirements. NISC-30 personnel conducted the following briefings in 1982:



- (U) Provided direct support to NAVMAT Soviet Ship Vulnerability Program.
- (U) Provided direct support to NAVSEA Surface Ship Intelligence Committee.
- 9. (U) Mr. C. Jedlicka (NISC-32) was selected to chair the Naval Weapon Systems Subcommittee (NWSS) of the Weapon and Space Systems Intelligence Committee (WSSIC). Mr. J. Lewis (NISC-33) was a member of the Weapons and Space Systems Intelligence Committee. Mr. J. Boyd (NISC-32) was selected as the alternate Navy member to the Joint Atomic Energy Intelligence Committee (JAEIC). Also, Mr. J. Wamsley (NISC-32) served as a NISC principal member to the Naval Sea Systems Command Intelligence Working Group.
- 10. (U) Mr. J. Lewis assumed the position of NISC-33 Division Head on 13 June 1982. LCDR L. Slagel relieved LT J. Rosenow as Division Head of NISC-32 on 19 July 1982, and LT J. Kelly relieved LT R. Huska as Division Head of NISC-35 on 30 July 1982.
- 11. (U) In August 1982, LT J. Rosenow assumed the duties of NISC Special Services Officer and Welfare and Recreation Fund Custodian.



VI - NAVAL WEAPONS TECHNOLOGY DEPARTMENT (NISC-40)

1. (U) HISTORICAL REVIEW

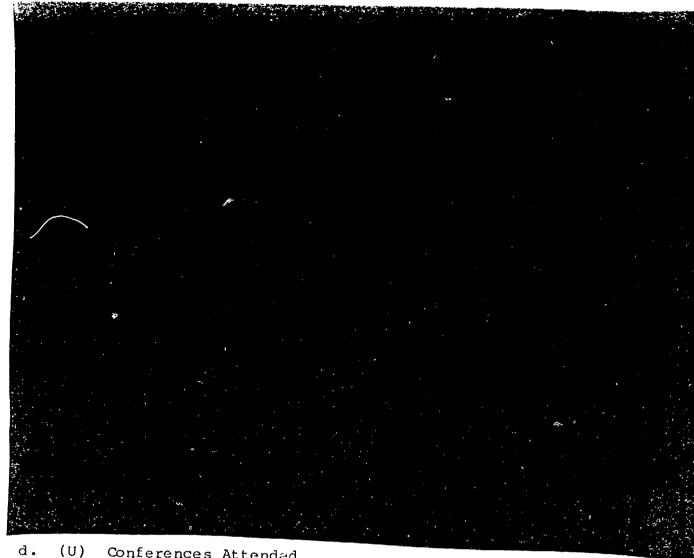
During calendar year 1982, the Weapons Technology Department consisted of three divisions; the Ballistic Missile Systems Division (NISC-41); the Aerodynamic Missile Division (NISC-42); and the Conventional Weapons Division (NISC-43). The Department was headed by Mr. Dennis P. Harman until October of this year. Mr. Kenneth J. Parys succeeded Mr. Harman as the Acting Department Head for the remainder of the year.

During 1982 NISC-40 presented 120 scheduled briefings, produced 17 DIA publications, supported 27 outside publications and answered approximately 1100 quick response tasks.

In June, Ms. Karen L. Evans was selected as Head, Aerodynamic Missile Division and Mr. Paul T. Atkinson as Head, Ballistic Missile Systems Division.

In December, CAPT. Ian M. Bailey reported aboard as Department Head, Naval Weapons Technology Department.

Significant Analysis Accomplishments



(U) Conferences Attended

- 1. TEBAC Conferences
- US/UK/CA Working Party 93 2.
- 3. Out of Area Conference
- SACLANT MARINTCOM CONFERENCE 4.
- US/FRG SASM Conference 5.
- AN/ALQ 170 Working Group 6.
- 7. Outer Air Battle Conference
- Naval Electronic Warfare Advisory Group Conference 8.
- 9. CINCFLT N-2 Conference
- 10. US/IDF Intelligence Exchange Conference
- 11. CROSSBOW
- 12. I-TEAM
- 13. SNCP
- 14. PAR
- 15. ACINT
- 16. Congressional Hearings
- 17. Sixth Annual US/IDF S&T Intelligence Exchange
- 13. Navy Sub-Panel of the Nuclear Intelligence Panel
- 19. MOBILE CHAIR
- 20. CLIPPER TROOP
- 21. ROWG Conference
- 22. Submarine Analysts Conference
- 23. Ballistic Missile Impact Working Group

e. (U) Significant Personnel Actions

1. Promotions

Miss K. Evans to GM-14 Mr. P. Pauls to GM-13

Mr. P. Pauls to GM-13

Mr. P. T. Atkinson to GM-14

2. Awards

OPR

Mr. P. Pauls

Mr. J. Tinsley

Mr. D. Darlak

Mr. D. Cwiak

Ms. C. Goad

QSI

Mr. J. Tinsley

Mr. D. Darlak

Mr. D. Cwiak

Ms. I. Pelaez

Ms. C. Goad

Mr. R. McGuire

Mr. A. Platt

SSP

Mr. L. Livingston

Civilian of the Quarter

Ms. I. Pelaez

Civilian of the Year

Ms. I. Pelaez

Nielson Award

Mr. K. Parys

3. New Hires

Mr. Keith R. Floyd in Apr 82

Mr. D. Goff in Jul 82

Ms. D. Locke in Aug 82

Mr. J. Martino in Aug 82

Ms. L. Janushevich in Aug 82

Mr. R. L. Murrer, Jr. in Sep 82

4. Resignations

Mr. K. R. Floyd in Jun 82

Mr. J. Stasko in Aug 82





- 5. Transfers
- Mr. W. Fideli in Feb 82 to NISC-36
- Mr. H. Silverman in Sep 82 to NISC-36
- 6. Training
- Mr. D. Abernathy student at Naval War College from Aug 82 through Jun 83.
- f. (U) Participation in National Level Activities, Working Groups, etc.
 - 1. Navy Member, WSSIC
 - Navy Member/Alternate Navy Member, Aerodynamic Missile Working Group, WSSIC
 - 3. Navy Member/US, UK, CA Working Party 93
 - 4. Navy Member/Alternate Navy Member, Aerospace Defensive System Subcommittee
 - 5. Navy Member/SIGINT Antiship Missile Task Force
 - 6. Navy Member/Alternate Navy Member, Ballistic Missile Systems Subcommittee
 - 7. Navy Member/Alternate Navy Member, Radar and Optical Steering Committee and Working Group
 - 8. Navy Member, Missile Impact Working Group
 - 9. Navy Member, Missile Production Working Group
 - 10. Navy Member, Smoke Aerosol Working Group to the Joint Technical Coordinating Group/Munitions
 - 11. Navy Member, COBRA JUDY Steering Committee
 - 12. Navy Member, Electro-Optical Working Group
 - g. (U) Significant Trips/Tad
 - 1. FTD, WPAFB, Ohio ARM Countermeasures Conference; TEBAC Conference
 - Norfolk, Va (2) FITCLANT Intelligence Officer Refresher Course Briefings; SACLANT/MARINTCOM Conference NEWAG Conference
 - Patrick AFB, Fl Visit NISC Reserve Unit
 - 4. United Kingdom (3) Special US/UK (CLUSTER ICON) project
 - 5. Rome, Italy Special US/IT (CLUSTER WAKE) project
 - 6. Orlando, Fl Electronic Countermeasures Course
 - 7. Dallas, Texas (2) Contract Monitoring
 - 8. Damneck, VA Briefing for Naval Guided Missile School
 - 9. State College, Pa Contract Monitoring
 - 10. Project Stepout
 - 11. Seattle, Wa Visit Boeing/ALCM Production Facility
 - 12. San Diego, Ca Visit General Dynamics/TOMAHAWK Production Facility
 - 13. Sunnyvale, Ca Contract monitoring and discussions on future Contracts
 - 14. Pt. Mugu, Ca Visit to PACMISTESTCEN on U.S. Cruise Missile tests

- 15. China Lake, Ca contract monitor at Naval Weapons Center
- 16. Burlington, Vt Attended a live fire demonstration of a multi-barrel gun system
- 17. NAS Brunswick, Me Provided briefing and analyst exchange 18. Vandenburg AFB, Ca Attended a Ballistic Missile Systems
- 18. Vandenburg AFB, Ca Attended a Ballistic Missile Systems Subcommittee (BMSS) sponsored field trip to tour Minuteman facilities and observe a missile launch
- 19. POMFLANT Charleston, SC Toured TRIDENT Missile handling facility
- 20. Cape Canaveral, Fl Attended TRIDENT DASO, briefed CO USS MICHIGAN on Soviet Collection Operations against TRIDENT system
- 21. MIA, Huntsville, AL Attended SA-N-7 I-TEAMS meeting, presented papers to working groups
- 22. NORAD/ADCOM Colorado Springs, Co Presented paper on SLBM system, overview and threat
- 23. AF Technical Applications Center, Patrick AFB, Fl Presented paper on Soviet SLBM RVs at Pony Express Symposium

h. (U) Training Accomplishments

- Prevention of Sexual Discrimination Karen L. Evans. Philip G. Pauls, Perry M. Roberts, C. Ostapovicz, J. Hyland, M. Bartol, R. McGuire, W. Best, K. Parys, F. Haberman, P. Atkinson, J. Welch and H. St. Aubin.
- Basic Performance Appraisal Program Philip G. Pauls, Perry M. Roberts, C. Ostapovicz.
- 3. Electronic Countermeasures Jon S. Tinsley
- 4. Electronic Countermeasures/Counter-Countermeasures Richard W. McIntire
- 5. Mine Warfare Familiarization Course M. Garramone
- Orientation to National AF Weapons Laboratories, Kirkland AFB and Los Alamos, NM - D. P. Harman
- 7. Naval War College, Newport, R.I. D. K. Abernathy (currently attending)
- 8. Senior Executive Seminar, Kings Point, NY P. T. Atkinson
- 9. Ballistic Missile Staff Course, Vandenburg AFB, Ca E. Williams, J. Martino

i. (U) Reports Published (Non-DIA)

- 1. CNO Point Papers
 - 2. Weekly Wires
 - 3. SIGAR Inputs
 - 4. Naval Scientific and Technical Intelligence Review (STIR)
 - 5. Missile Matrix
 - 6. National Intelligence Estimates/Inputs
 - 7. Collection guidance and quicklook and in-depth analysis reporting for Special Navy Collection Program (SNCP)
 - 8. Inputs to National SIGINT Requirements List



9. DIAGRAM Article on UDALOY SAM 10. NITS

j. (U) DIA Publications

- "Current Naval SAM Systems USSR",
 DST-1060S-171-80-CHG 2
- "The SOVREMENNY Naval Gun, A Technical Assessment", DST-1260R-062-81
- 3. "Naval Sea & Land Launched Cruise Missile Systems (Current) ECC", DST-1330S-205-81
- 4. "Soviet Naval Antiship Cruise Missile ECCM Characteristics", DST-1330R-208-81-CHG-1
- 5. "Reserve Wartime Seeker Parameters for Soviet Naval Cruise Missiles", DST-1330R-209-82
- 6. "Naval Guided Missile Test Ranges USSR", DST-1070S-198-80-SAO-CHG-1
- 7. "Analysis of SLBM Weapon Systems Activity", DST-1020C-594-82-SAO
- 8. "Cruise Missile & Tactical Air-to-Surface Missiles Free World (PENGUIN)", DST-1330S-024-82
- 9. "Current Naval SAM Systems USSR", DST-1060S-171-82
- 10. "Cruise Missile & Tactical Air-to-Surface Missiles Free World (EXOCET)", DST-1330S-020-82
- 11. "Warsaw Pact Mine Warfare Capabilities", DST-1260S-110-82
- 12. "Naval Weapon Systems (less Missiles) Handbook ECC", DST-1260H-061-77-CHG-4
- 13. "Developments in Soviet Naval Cruise and Antisubmarine Missiles", DST-1330S-210-82-SAO
- 14. "Aerodynamic Missile Handbook USSR", DST-1330H-248-80-CHG-2
- 15. "Analysis of SLBM Weapon Systems Activity", DST-1020C-595-82-SAO
- 16. "Submarine Launched Ballistic Missile Weapon Systems USSR", DST-1020S-418-78-CHG-3
- 17. "PENGUIN Sea Launched Cruise Missile (U)", DST-1330S-024-82
- 18. "Naval SAM System Trends USSR (U)", DST-1060S-174-82
- 19. "Defensive Missile Systems Handbook ECC", DST-1000H-250-82

k.

Support to Other NISC Departments

NISC-000

- -Command Inspection
- -Command History
- -ICR's/CIR's Review/Update
- -IR Evaluations
- -MASINT Requirements
- -COLOPs





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		-Foreign Material Collection Support -Foreign Technical Document Exploitation Support
(U)	NISC-OSP	-PD Rewrites -Personnel Actions -Entrance Level Position Programs -Training Actions
(U)	NISC-20	-ACINT Rider Lecture Program, quarterly -ACINT Conference Speakers
(ប)	NISC-30	-Ship, Submarine, and Aircraft Studies and trends publications -Soviet Military R&D -ASW Ordnance -Naval Forces R&D Resources - USSR -FSSTAG Briefing Support -AEGIS/SM-2 RDT&E Threat Support -CANUKUS MARINTCOM 82
(U)	NISC-50	-Computer Technology and Applications -ASCM - ECCM -SIRVES Support -Radar Data Analysis Report -Telemetry Analysis
(U)	NISC-60	-CIRC Journal Requirements -Open Literature Selection Guide
(ប)	NISC-70	-Basic Imagery Interpretation Report -Development National Tasking Plan (NTP)
	NISC-OOW	-Soviet Naval Threat to CIRCA 2000 -Soviet Threat to Surface Forces -Soviet Threat to Air Forces -Anti-Ship Cruise Missile -Soviet AAW/ASMD Capabilities -Articles for NAVSTIR -Weekly Wire Articles -Soviet Threat to Undersea Forces -Navy Back-up Point Papers -Threat/Capabilities MATRIX (TCM) -Anti-Radiation Missile (ARM) Countermeasures -TRIDENT Threat Support -Aerodynamic Missile Radar Cross Section -Aerodynamic Missile Infrared



Signatures

- (U) NISC-OOR -Congressional Justification Book (CJB)
 -POM 82, 83
 -FY-82, 83 External Assistant Plan
- (U) NISC-OOA -NIC 5 year plan
- 1. (U) Support to other Agencies on Publications

CNO- SNCP Collection Guidance Manual

CNO- TAO Handbook (NWP 12-5)

FTD- Aerodynamic Missile Guidance/Control

FTD- Missile Industry/Design/Development

MIA- Defensive Missile System Handbook

FTD- Chemical Rocket Propulsion Technology

FTD- Rocket Propulsion Technology

FSTC-Smoke & Other Warfare Obscurants - FGN

FTD- Ballistic Missile Guidance/Control

CNO- LCAC/MCM Study

FTD- A/C Armament Developments

DIA- Automated DB Air Defense Weapon Systems

FTD- BW/CW Capabilities

FSTC-Flame/Incendiary Materials/Devices

FSTC-Smoke/CW Obscurants

FSTC-CW/BW Capabilities Asian Communist Countries

FSTC-Nuclear Defense Equipment/C2

FTD- Ballistic Missile Guidance/Control USSR & China

MIA- Missile Systems Handbook - F.W.

FTD- Chinese Ballistic Missile Systems (Trends & Projections

FTD- Ballistic Missile Payload Study

USAF-USAFE Missile Handbook

FTD- Ballistic Missile HB-USSR/China

- m. (U) Participation in Special Projects
 - 2.
 3.
 - 5. (U) Monitored contracts with Vought Corporation
 - and GTE Sylvania.

VII - ELECTROMAGNETIC SYSTEMS DEPARTMENT (NISC-50)

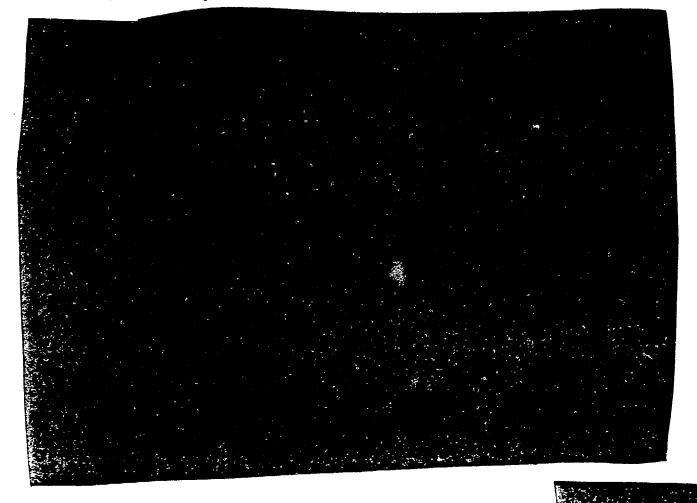
(U) The Electromagnetic Systems Department is headed by CDR M. K. BOHN, USN. NISC-50 was reorganized into two divisions and a staff element during 1982. The staff element is Requirements and Support (NISC-50R). The divisions are Electronics Division (NISC-51), and Communications/Ocean Surveillance Division (NISC-52) The department is responsible for S&T intelligence in the following areas:

NISC-50R

The Requirements Support Element is responsible for the management of all naval electromagnetic collection requirements, including COMINT and HUMINT.

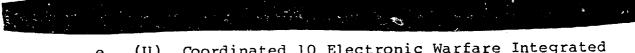
NISC-50R is responsible for providing maintenance and future ADP support to the Signals Analysis Laboratory of NISC-50.

(U) During 1982 the following occurred:





- 3. (U) The following support provided for command collection requirements.
- a. Ninety-five Techical ELINT Requirements were added and/or updated.
- b. (U) Six hundred intelligence reports (IR's) were reviewed.
- c. (U) Approximately 150 changes and/or updates were made to the Technical Parameter List (TPL). The TPL is a data base containing only technical ELINT data.



e. (U) Coordinated 10 Electronic Warfare Integrated Reprogramming (EWIR) visits to NISC. Also attended a 2 day conference at Kelly AFB, San Antonio on the BLUE/GRAY Electronic Warfare Integrated Reprogramming Data Bases.

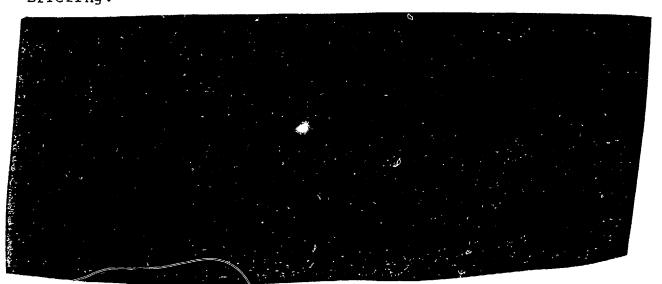


g. (U) Attended 4 ELINT Requirements Working Groups (ELWG) as a representative for COMNAVINTCOM. This working group reviews all technical ELINT requirements before they are validated for the National SIGINT Requirements List (NSRL).

NISC-51

The resultant intelligence is disseminated to the operating forces, OPNAV, NAVMAT, laboratories and other intelligence agencies via numerous reporting vehicles. The Division provides technical coordination and guidelines in support of various intelligence collection programs.

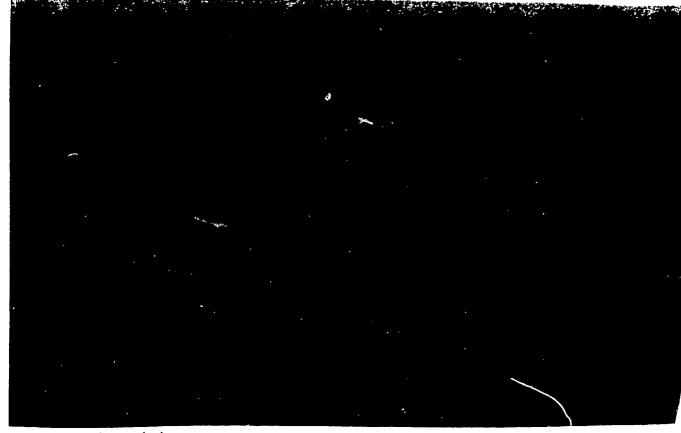
- 1. (U) NISC-51 personnel attended the following meetings, conferences, and committees:
- a. (U) Participated in the USDR&E sponsored Tri-Service CROSSBOW-S Committee.
- b. (U) Provided alternate Navy member on the DCI Scientific and Technical Intelligence Committee (STIC).
- c. (U) Participated in and chaired the Technology Forecasting Working Group of STIC.
- d. (U) Participated in STIC Working Groups on Signal Processing, Millimeter Waves, Computers, R&D Resources, Directed Energy and Electro-Optics.
- e. (U) Participated in the Weapon and Space System Weapons Committee (WSSIC) Working Group on Electronic Warfare.
 - f. Provided direct support to
 - 2. (U) NISC-51 personnel provided the following briefings:
- a. (U) Provided major support in Particle Beam Weapons Briefing.





3. (U) The following significant tasking and analytical achievements occurred:



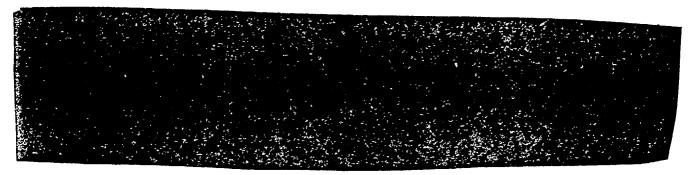


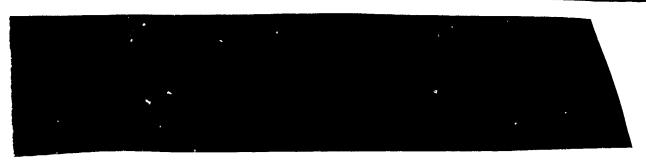
k. (U) Provided signals information and signals analysis support to NAVSWC Dahlgren for AN/SLQ-32 software validation and verification.



n. (U) Performed in-depth analysis and feedback on 15 High Interest Signals Analysis Reports (HISAR) and 29 Special Interest Signals Analysis Reports (SISAR).

o. (U) Provided parametric data base information in support of the AWG-21 program, the Mediterranean AN/SLQ-32 mainline library, the S-3/P-3 programs, and the HARPOON cruise missile program.





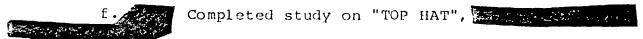
u. (U) Completed definition outline of Soviet "Radio Electronic Combat" (REC).



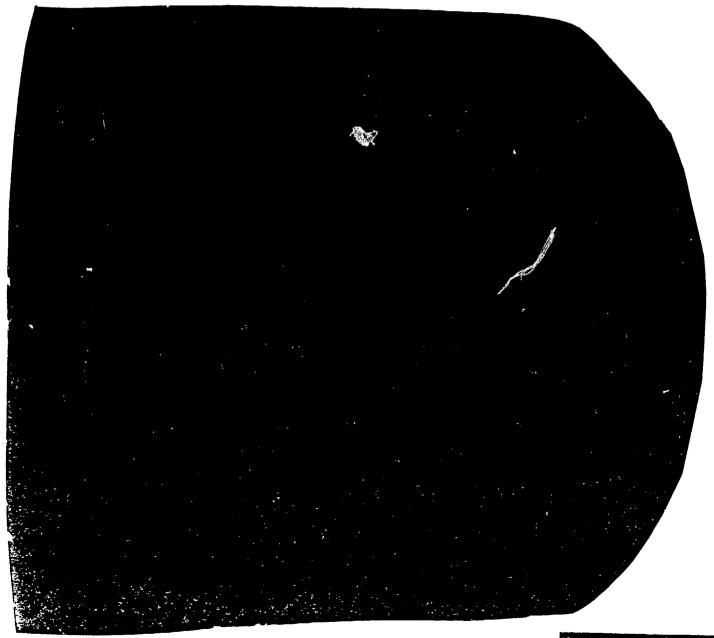
- w. (U) Supported TOMAHAWK and HARPOON Threat Definitions.
 - x. (U) Participated in AEGIS annual review symposium.
- y. (U) Provided direct support to FEWSG and FITRONLANT in updating Soviet Airborne Threat data.
- z. (U) Expanded forecasting capabilities through CLUSTER PEACOCK.



- bb. (U) Initiated an artificial intelligence project with ONR to develop an analyst technical analysis support system.
- 4. (U) Disseminated and/or provided support to the following electronic warfare publications:
- a. (U) Produced the Radiation Characteristics of Electronic Equipment publication.
- b. (U) Updated the Free World Radar Handbook Vol III Shipborne Radar and IFF.
- c. (U) Updated the Eurasian Communist Countries Radar Handbook Vol III Shipborne.
- d. (U) Updated NATO Radar Handbook (MC-262) Soviet and Warsaw Pack Naval Radars.
- e. (U) Completed study on "Soviet Shipboard CHAFF and CHAFF Launcher Capabilities."



- g. (U) Provided major contribution to "ECM/ESM Capabilities ECC".
 - h. (U) Completed study on "Laser Facility #7."
- i. (U) Completed initial study on "Review of Information on Digital Automated Control Systems Used on Board Soviet Submarines".
- j. Completed study on "Soviet Naval Electronics Warfare (EW) Systems Development".
- $k_{\:\raisebox{1pt}{\text{\circle*{1.5}}}}$ (U) Provided major or significant inputs to the following publications:

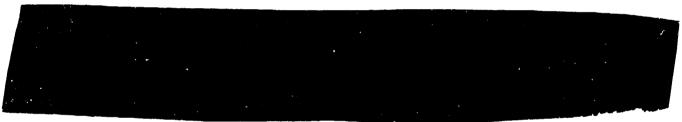




NISC-52

(U) The Communications/Ocean Surveillance Division produces S&T intelligence

1. (U) NISC-52 personnel participation the following meetings, conferences and committees:



d. (U) CANUKUS WP-92 Joint Conference on Soviet Electronics Systems.

- f. (U) TEBAC.
- g. (U) Space Intelligence Master Plan.
- h. (U) Various meetings held with NSA represenatives concerning satellite activites message format.
- i. (U) Meetings held with and provided S&T intelligence support on Soviet space systems to the following organizations:
- (a) (U) Naval Security Group SSIXS Vulnerability/Outboard.
 - (b) (U) COMNAVELEXSYSCOM

NAVELEX-06 - ITSS PME-106 - USQ-87 PME-107 - SLQ-34, SKR-7

- (c) (U) COMNAVSEASYSCOM FSSTAG Support:
- (d) (U) CNO

OP-095 - Warfare Planning

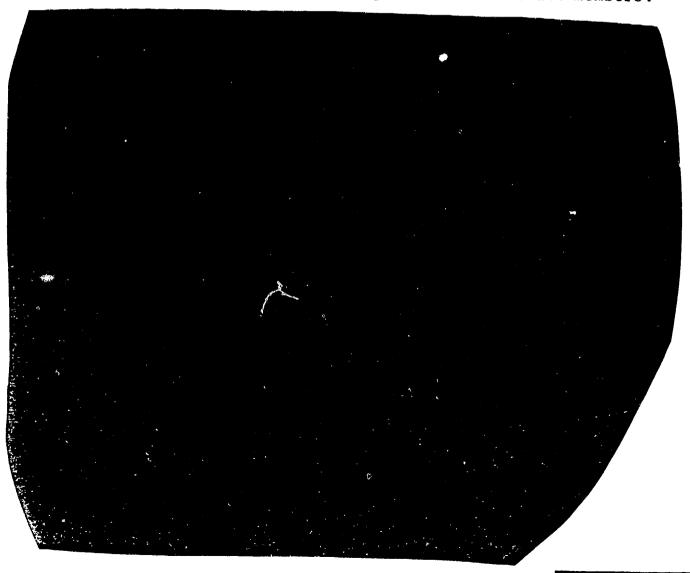
OP-944 - C3CM

OP-943 - FLTSATCOM Threat

OP-212 - FLTSATCOM Threat

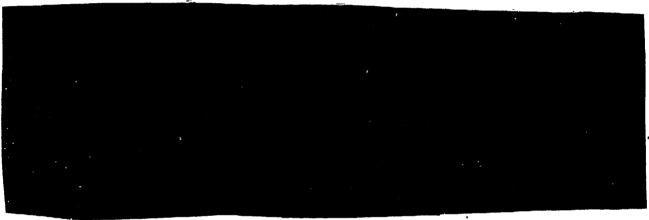
OP-952 - Remote Ocean Sensing.

- (e) (U) Naval Research Laboratory
 Countermeasures developments/CLASSIC WIZARD
 TACTRAGRULANT Space Systems
 COMSECONDFLT OCEAN VENTURE
 Aerospace systems Division Remote Ocean
 Sensing
- 2. (U) NISC-52 personnel provided the following briefings to various DOD/OPNAV/CHNAVMAT/Fleet Flag Officers and staff members:



3. (II) The following to this and

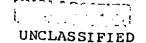
3. (U) The following tasking and analytical achievements occurred:



- 4. (U) Disseminated and/or provided support to the following publications:
- a. (U) Updated CNO Point Papers "Soviet Command, Control and Communications" and "Soviet Ocean Surveillance Capabilities."
- b. (U) Contribution to FSTC for DIA publication DST-1720H-512-81, Vol I "ECC Telecommunications Equipment Handbook USSR."



documents under the contracts.



VIII - INFORMATION SYSTEMS DEPARTMENT (NISC-60)

Significant events occurring were the relocation of the Department Head and Staff Elements from the second floor to the first floor of the NIC II Building due to better space utilization.

CAPT J.R. Kight was relieved as Head of the Information Systems Department by CDR R.M. Jewell in May 1982.

NISC-61 Micrographics Division

The Naval Intelligence Processing System (NIPS) Augmentation Package (NAP) and Shipboard Migratilm Program Data Bases were updated twelve times. Produced five million pieces of miniaturized intelligence.

Four new "full" data bases were issued to new users with Global intelligence requirements.

Two major data base conferences were hosted by NISC-61: NIPS Data Base Working Group, which was conducted for the publications portion of the data base, and the second meeting was attended by representatives from Headquarters, Tactical Air Command, Fleet Intelligence Center Europe and Atlantic, DIA, NIC-05 and NISC for the purpose of establishing a production method for Automated Tactical Target Materials and Amphibious Studies.

The Division acquired five new personnel.

NISC-62 Translation Division

NISC-62 continued to produce and expand coverage in three major publications: Soviet Naval Digest, Soviet Shipbuilding, and NAVSCAN which has now been divided into SOVFLEETS and WESTFLEETS sections.

The Glossary of Soviet Naval Abbreviations compiled by Russell R. Zavistovich of NISC-62 was published in January 1982.

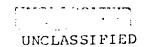
Ms. Cheryl Baden received the NISC Civilian of the Quarter.

Mr. Herman Belferman, a Language Specialist with the Translation Division for 10 years, retired in September 1982.

Two new linguists were hired, Paul T. Hopper and Margaretha Nekimken, increasing NISC-62's language coverage.

NISC-63 Information Systems Division

The SCI Library total automation project was completed in October 1982.





Three commercially available data bases were acquired through the Federal Committee (FLC). DIALOG, BRS, and ORBIT all provide world-wide coverage to S&T open literature.

Approximately 300 Russian monographs per year were added to the collateral collection.

The Collateral Library ordered 72 new periodical titles and received 3,375 issues during the year in support of the new program to exploit Oriental language publications.

The following 1982 statistics represent a broad scope of NISC-63 responsibilities: 359 CIRC searches; 2,013 DIAOLS/COINS searches; 892 SOLIS searches; 2,036 NDSB (NPIC) searches; 886 AIRES searches; 51 DROLS (DTIC) searches; 52 commerical data base (DIALOG, BRS, ORBIT, Derwent) searches; 6,188 general information requests; 220,000 IIRs received; 160,000 publications (non-IIR) received; 34,223 items circulated; 68,000 items routed; 1,010 CIRC items indexed; 2,053 library items cataloged/indexed; 296 NIPR items indexed.

NISC-64 Reprographics Division

The Photographic Branch processed 14,585 photographic work requests and produced 2.2 million photographic units.

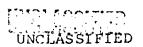
The Lithographic Branch produced 7.9 million units in support of Intelligence Publications, reports and studies. The eight unit Press (Heidelberg) and collator are in full operation, which greatly increases the production capabilities.

New equipment: color print processor, enlargers, luxometers and film processors.

NISC-65 Publications Division

The Editorial Branch, (NISC-651) and the Graphics Branch (NISC-652) edited, type composed, and layed out 96 scientific and technical publications originated by command analysts and tasked by DIA, NAVINTCOM, and national-level taskers. NISC-652 designed and layed out 15,000 visual graphics, briefing boards, and technical illustrations.

The Alphatype Corporation's computerized phototypesetting system replaced the OMNITEXT Corporation system in April 1982. A second phototypesetter, the Itek Corporation's Mark V was installed in June 1982.



IX - IMAGERY DEPARTMENT (NISC-70)

- 1. (U) In 1982 the Imagery Analysis Department (NISC-70) was headed by Captain R.W. Chapin, Jr. The following paragraphs include information that is pertinent to the NISC Command History for 1982.
- 2. (U) PROVIDED NAVY PRIMARY (P) AND ALTERNATE (A) REPRESENTATION TO THE FOLLOWING COMMITTEES:
- Committee on Imagery Requirements and Exploitation (COMIREX) (A)
 - Imagery Planning Subcommittee (IPS) (P)
 Exploitation Programs and Working Group (EPWG) (P)
 Advanced Systems Working Group (ASWG) (P)
 Radiometrics Capabilities Working Group (P)
 National Tasking Plan (NTP) Review Group (P)
 CAMS II Task Force (P)
 Exploitation Softcopy Systems Working Group (ESSWG) (P)
 - Operations Subcommittee (OPSCOM) (P)
 Current Requirements Working Group (CRWG) (A)
 Standing Requirements Working Group (SRWG) (P)
 Data Base Administration Working Group (DBAWG) (P)
 - Exploitation Research and Development Subcommittee (EXRAND) (P)
 Procurement and Coordination Team (PCT) (P)
 Technical Task Team (TTT) (P)
 - Mapping, Charting and Geodesy Working Group (MC&GWG) (A)
 - TK Modification Working Group (TKMWG) (P)
 - Sanitization and Decontrol Working Group (P)

DIA

DOD Joint Imagery Interpretation Keys Committee (KEYSCOM) (P) DIA Electro-Optical Coordinating Group (P) DIA Joint Recognition Materials Committee (P) Defense Steering Group (A) Department of Defense Intelligence Information Systems Working Group (P)

- Remote IDEX Facility Working Group (RIFWG) (P)
- Mensuration Standards Group (P)
- Terrestrial Information Exchange Panel (P)
- Soviet Naval Imagery Panel (SNIP) (P)
- Clipper Troop AD HOC Group (P)



- (U) Implemented new attache report system with DIA.
- (U) Two volumnes prepared for attaches' training DIS.
- (U) Prepared six Open Ocean Photographic Shipments.
- (U) Continued photographic support to attaches.
- (U) Provided eighty five significant graphic support items.



(U) Prepared sixteen Q-P-Q evaluations.

Completed twelve SIIGS.

Completed Submarine Net Project.

- (U) Continued to provide inputs, based on imagery analysis, to the NISC contributions to
 - (U) Hosted imagery interpreters from the UK.
- (U) Prepared quick response Weekly Wire imagery analysis of unusual, significant, new or modified objects within areas of NISC responsibility.



(U) Continued to provide quick response imagery exploitation services to the other NISC departments, COMNAVINTCOM, NFOIO, NFOIO-Det and NOSIC.

(U) Completed Special CNO Support Project.

- (U) Presented one hour orientation brief to NATC personnel and students at DIS.
 - (U) Presented standard HILITES brief to NRL.
 - (U) Established familiarization tour for FICLANT.
- (U) Processed and evaluated 17,468 film transparencies (chips) for analytical exploitation.
- (U) Distributed the Infrared Imagery in Naval Intelligence textbook to Fleet units and schools.



- (U) Produced a trial key entitled Downward Looking Infrared Guide to support the TARPS program.
- (U) Disseminated the Recognition Guide of Naval Auxiliaries to all Fleet units.
- (U) Produced a video tape of Admiral Inman's retirement ceremony.



- (U) Provided closed circuit TV for several Command functions during the year.
- (U) Produced a video tape of Admiral Shapiro's retirement ceremony.
 - (U) Provided a video display for NIC #1 quarterdeck.
 - (U) Produced a video tape of IAIPS training.
- (U) Two tapes containing computed dimensional data were furnished to the Naval Surface Weapons Center in a continuing support of the DISTANT RUNNER Program.
- (U) A contract was awarded to ESL for a period of one year ending August 1983. The contract will provide an initial

investigation of Synthetic Aperture Radar (SAR) for its applicability and utility to imagery analysis functions.

- (U) Continued Contract Monitoring of:
- a. Design, fabrication and integration of electronic interface devices between NISC's mensuration comparators and the Digital Exploitation System (DES). The DES interface was completed in December with training to occur in Jan 1983. NISC-70's two precision comparators will be interfaced by September 1983 when the electronic devices are delivered.

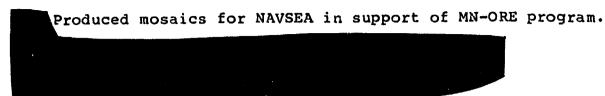


- c. There is an ongoing Digital Exploitation System (DES) contract with ESL. ESL will provide a statement of work for a follow-on effort.
- (U) Completed automation of the SCI Library data base functions for NISC-60. The requirements were to automate the cataloging/indexing and circulation (storage/retrieval, and sign-in/out) functions of the Special Library.
- (U) Completed the interface between NISC-70's HP-3000 and NISC-60's OMNI TEXT or ALPHA KEY system. This allows reports generated by NISC-70 analysts to be transferred to the OMNI TEXT or ALPHA KEY with the appropriate type setting commands to create the final published report.
- (U) New application software was developed to allow query/response and update capability for CSO data base users.
 - (U) Began KA 153 camera evaluation at El Toro, CA.
 - (U) Repaired eight light tables & three reader printers.



- (U) Prepared four special project support packages.
- (U) Produced contour chart for TRW.
- (U) Analyzed MSN-Q-20.

- (U) Analyzed NR-1 mission.
- (U) Produced threat support package for MSN-Q-22.



- (U) Funds were sent to Naval Ocean Systems Center (NOSC) to develop a system which provides an automated plotting capability that will be used to analyze Naval Order of Battle and force readiness in a time responsive manner for I&W purposes.
- (U) Funds were sent to NOSC to design, fabricate and integrate electronic interface devices between NISC's mensuration comparator and NPIC's mensuration system. This enhancement will greatly reduce NISC's mensuration software development costs over the next four years.
- (U) Awarded a contract to MANTECH to investigate and produce a complete requirements document for establishing a ship infrared signature data base at NISC.
- (U) Awarded a contract to ESL to investigate Synthetic Aperture Radar (SAR) applicability and utility to imagery analysts functions.

5. (U) SIGNIFICANT DISCOVERIES





6. (U) EQUIPMENT PROCURED, MODIFIED OR INSTALLED

- (U) Procured 25 Bausch & Lomb 240 Stereoscopes and 26 Eikonix Light Tables.
- (U) Completed maintenance of the Stereo Comparator after it had been down for six months.
 - (U) Procured eight sets of Richards motorized film drives.
 - (U) Completed reconfiguration of the DIPS Analysis Laboratory.
- (U) Procured 2 video tape cassette recorders and 1 video graphic copier.
 - (U) Procured 5 Wilde M-5 steroscopes.
 - (U) Procured 24 sets of FJW 15X eyepieces.
 - (U) Procured 24 pair of FJW 2.65X stereo lenses.
 - (U) Procured 3 B&L zoom 500 imagery analysis stations.
 - (U) Procured and installed an AIRES terminal.
- (U) Installed electronic T-bar switch for input of digitizer table or terminal data to HP-3000.

7. (U) NEW SYSTEMS DEVELOPED

8. (U) QUID PRO QUO PROGRAMS

9. (U) PERSONNEL CHANGES

- (U) Mr. Partridge was detailed to NIC OOJ on the JNIDS staff for one year.
 - (U) Mr. Jenkins was detailed to the NISC-73 division head.
 - (U) LT Lawrence was detailed to NISC-20 indefinitely.
 - (U) IS1 Fabian and ISC Cattell departed NISC-73.
 - (U) Lt Dosta and IS2 Rosenberg arrived for duty in NISC-73.
 - (U) IS1 Ebright completed term of enlistment and departed NISC.
 - (U) Mr. Hurd resigned from his position in NISC-73.
- (U) One analyst was detailed to IAG for three months to help prepare Navy related radar keys.

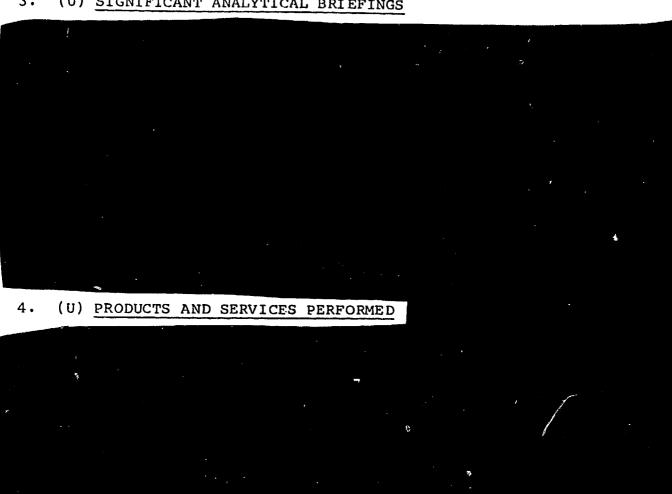
- (U) Mr. Levengood was transferred to NISC-OOW.
- (U) IS1 Viera arrived for duty in NISC-73.
- (U) Mr. Henderson transferred from NISC-74 to NISC-71.
- (U) ISCS Leslie arrived for duty in NISC-71.
- (U) Mr. Colvin arrived for duty in NISC-71.
- (U) NISC-724 became NISC-75 on 19 May 1982.
- (U) Mr. Owens arrived for duty in NISC-75.
- (U) Mr. Mignone departed NISC-75.
- (U) Mr. Tatum arrived for duty in NISC-74.
- (U) Mr. Corbitt departed from NISC-74.
- (U) SSGT Norton arrived for duty in NISC-72.
- (U) Mr. Cowan arrived for duty in NISC-72.
- (U) IS1 Robbins departed from NISC-72.
- (U) IS2 DelPlato arrived for duty in NISC-72.
- (U) Mr. Rice resigned from NISC-72.
- (U) Mr. Baughman arrived for duty in NISC-72.
- (U) Mr. McDanald departed from NISC-72.
- (U) Mr. Vasques arrived for duty in NISC-74.
- (U) Mr. Bucaccio arrived for duty in NISC-72 and later transferred to NISC-30.
 - (U) Miss. Widmayer arrived for duty in NISC-70.
 - (U) Mrs. Woodward departed from NISC-70.

10. (U) PERSONNEL TRAINING

- (U) Two analysts attended the Advanced Imagery Integration Training course at Offutt AFB, Nebraska. (one week).
- (U) Four analysts attended the Advanced Radar Interpretation course at IAG. (five weeks).
- (U) Eight analysts attended the Briefing Techniques course (three days).

Soviet Navy Ship Vulnerability Working Group (P) Submarine Information Evaluation Working Group (P) Cover, Concealment, and Deception Technical Review Group (CC&DTRG) (P)

(U) SIGNIFICANT ANALYTICAL BRIEFINGS 3.



- (U) One analyst attended the COMIREX Management Course at Offutt, Nebraska (one week).
- (U) Three analysts completed on-the-job training at the IAG facility (two weeks).
- (U) Four persons attended the COMIREX Automated Management System (CAMS) update course (two weeks).
- (U) One person attended the Infrared Technology Fundamentals and Systems Application course at the University of Michigan (one week).
- (U) One person attended the Synthetic Aperture Radar Technology and Applications course at the University of Michigan (one week).
- (U) One person attended the mid-career development school at DIS (ten weeks).
- (U) One person attended a special course in current collection systems management (one week).
- (U) One person attended the intelligence analyst course at DIS (six weeks).
- (U) Eight NISC, one Army, and two Defense Mapping Agency persons attended a course at NISC on filtering for softcopy exploitation (one week).
- (U) Three persons attended a course for the IDIMS users at Goddard Space Flight Center (one week).
 - (U) Two persons attended the HP users group meeting (one day).
- (U) Two persons attended the HP Systems Manager course (one week).
- (U) Two persons attended the Effective Writing Course (three days).
- (U) One analyst attended the Electronics Block of DSIAIP at Offutt AFB (one week).
- (U) Two persons continue to attend a Russian transliteration class.
- (U) Several persons attended a class for the prevention of sexual harrassment (one day).
- (U) One analyst attended the comparative Naval Ship Design course at MIT (one week).

- (U) Five analysts attended the Analytical Photogrammetry course (four weeks)
- (U) One analyst attended the Mine Warfare Training Course (two weeks).
- (U) One analyst attended the Armed Forces Staff College (five months).
 - (U) One analyst attended the DSIATP school (ten weeks).
- (U) One analyst attended the Multi-Spectral Imagery Interpretation course (six weeks).